

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A composition which comprises a compound of the formula (I)

A-L-B (I)

in which

A is a monomer of TKPPR or a monomer of a TKPPR analogue which specifically binds to NP-1 or cells that express NP-

1 with avidity that is equal to or greater than TKPPR;

L is a linker; and

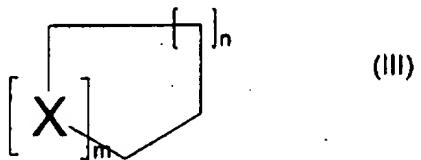
B is a phospholipid.

Claims 2-22 (Canceled)

23. (Original) A composition according to claim 1, in which L is a bond or is derived from: an alkyl chain C₁-C₆₀₀₀, linear or branched, saturated or unsaturated, optionally interrupted or substituted by one or more groups such as: O, S, NR, OR, SR, COR, COOH, COOR, CONHR, CSNHR, C=O, S=O, S(=O)₂, P=O(O)₂OR, P(O)₂(OR)₂, halogens, or phenyl groups, optionally substituted by one or more -NHR, -OR, -SR, -COR, -CONHR, -N-C=S, -N-C=O, halogens, in which R is H or an alkyl group C₁-C₄, linear or branched, optionally substituted by one or more — OH; such a chain can be interrupted or substituted by one or more cyclic groups C₃-C₉, saturated or unsaturated, optionally interrupted by one or more O, S or NR; by one or more

groups such as: -NHR, -OR, -SR, -COR, -CONHR, or a phenyl group optionally substituted by one or more -NHR, -OR, -SR, -COR, -CONHR, -N-C=S, -N-C=O, halogens.

24. (Original) A composition according to claim 23, in which the cyclic groups present in L are saturated or unsaturated, and correspond to the following general formula (III)



in which

- n can range from 0 to 4;
- m can range from 0 to 2;
- X can be NH, NR, O, S or SR.

25. (Original) A composition according to claim 23, in which the linker L is an oligopeptide comprising 1 to 100 natural or synthetic amino acids.

26. (Original) A composition according to claim 25, in which the amino acids are selected from the group consisting of glycine, glutamic acid, aspartic acid, γ -amino-butyric acid and trans-4-aminomethyl-cyclohexane carboxylic acid.

27. (Original) A composition according to claim 23, in which L is derived from difunctional PEG(polyethyleneglycol) derivatives.

28. (Original) A composition according to claim 23, in which L is selected from the group consisting of: glutaric acid, succinic acid, malonic acid, oxalic acid and PEG derivatized with two CH₂CO groups.

29. (Previously presented) A compound of the formula (IIa)

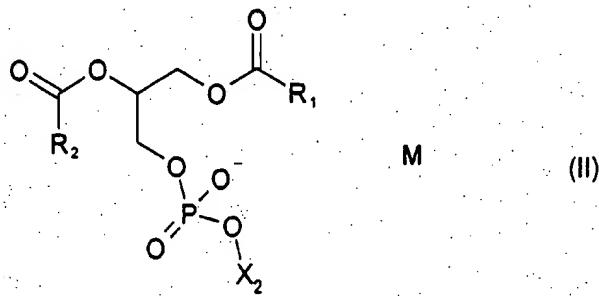


in which

A is a monomer of TKPPR or a monomer of a TKPPR analogue which specifically binds to NP-1 or cells that express NP-1 with avidity that is equal to or greater than TKPPR;

L is a linker; and

B_{1a} comprises a phospholipid moiety of the formula (II),

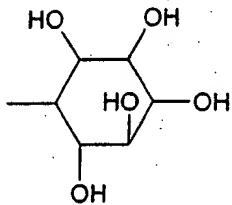
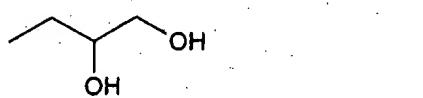
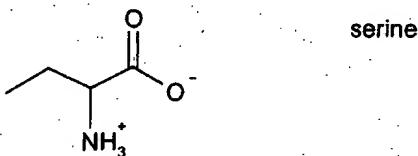


where

M is an alkaline or alkaline- earth metal cation;

R₁ and R₂ independently, correspond to a linear long chain C₁₂-C₂₀, saturated or unsaturated, optionally interrupted by C=O, or O; and

X₂ is selected from the group consisting of



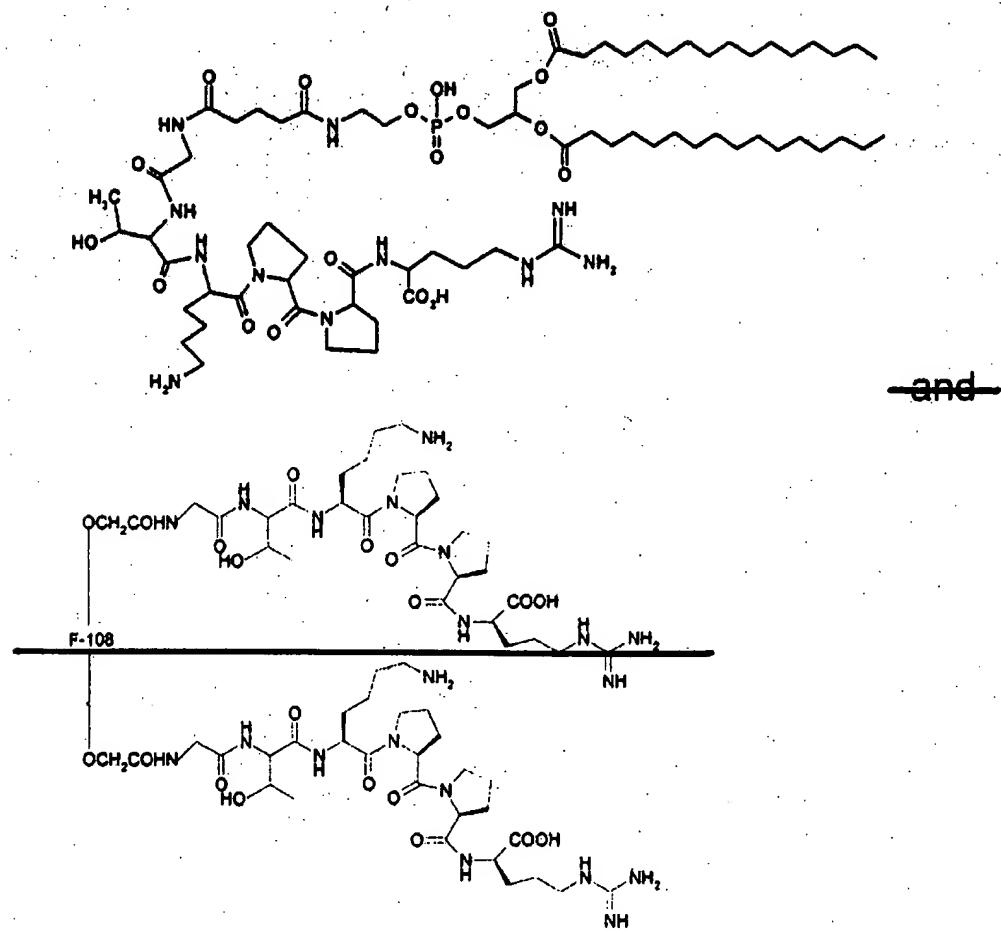
30. (Original) A compound according to claim 29, in which R₁ and R₂ are independently a saturated linear long chain C₁₂-C₂₀.

31. (Original) A compound according to claim 30, in which the phospholipid of formula (II) comprises a phospholipid selected from the group consisting of:
dimyristoylphosphatidylethanolamine, dipalmitoylphosphatidylethanolamine,
distearoylphosphatidylethanolamine, diarachidoylphosphatidylethanolamine,

dioleylphosphatidylethanolamine, dilinoleylphosphatidylethanolamine, fluorinated analogues of any of the foregoing, and mixtures of any of the foregoing.

32. (Original) A compound according to claim 31, in which the phospholipid of formula (II) comprises dipalmitoylphosphatidylethanolamine.

33. (Currently amended) A composition comprising a the following compound selected from the group consisting of:



34. (Original) An ultrasound contrast agent comprising a suspension of gas-filled microbubbles, in which the microbubbles comprise a compound of any one of claims 29 to 32.

35. (Original) An ultrasound contrast agent comprising a suspension of gas-filled microbubbles, in which the microbubbles comprise a compound of claim 29 and the gas comprises a fluorinated gas.

36. (Previously presented) An ultrasound contrast agent comprising a suspension of gas-filled microbubbles in which the microbubbles comprise a compound of claim 29 in which A is TKPPR monomer and the gas comprises SF₆, or a perfluorocarbon selected from the group consisting of C₃F₈, C₄F₈, C₄F₁₀, C₅F₁₂, C₆F₁₂, C₇F₁₄ and C₈F₁₈.

Claims 37-48 (Canceled)

49. (Currently amended) A method of ultrasound imaging comprising administering an ultrasound contrast agent comprising a suspension of gas-filled microbubbles, in which the microbubbles comprise a compound of the formula (IIa)

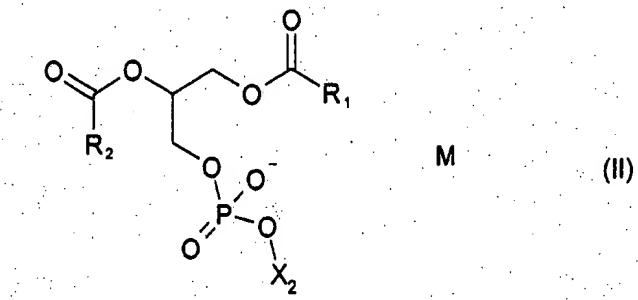
A-L-B_{1a} (IIa)

in which

A is a monomer, multimer or polymer of TKPPR or a monomer of a TKPPR analogue which specifically binds to NP-1 or cells which express NP-1 with avidity that is equal to or greater than TKPPR;

L is a linker; and

B_{1a} comprises a phospholipid moiety of the formula (II),



where

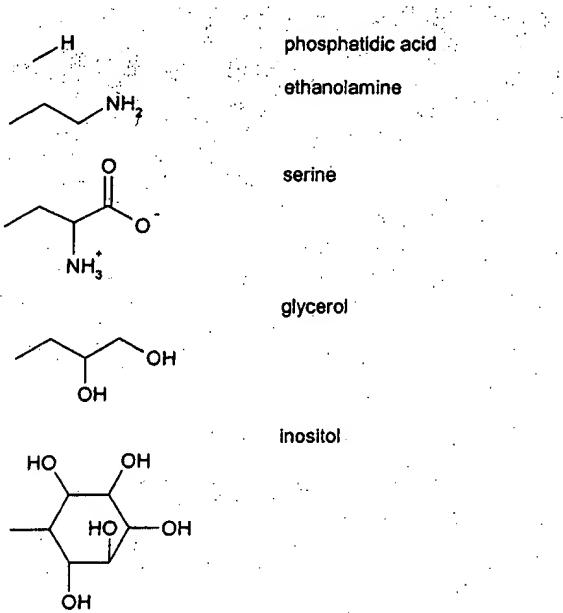
M is an alkaline or alkaline-earth metal cation;

R₁ and R₂ independently, correspond to a linear long chain

C₁₂-C₂₀, saturated or unsaturated, optionally interrupted by C=O, or

O; and

X₂ is selected from the group consisting of



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Claims 50-65 (Canceled)